

### **REMARKS/ARGUMENTS**

Applicant has submitted an Information Disclosure Statement (IDS) together with this response. The Information Disclosure Statement lists the prior art cited in the International Search Report on the corresponding PCT application and includes USP 6,066,278 currently cited by the Examiner. Applicant requests that the Examiner consider the prior art listed in the IDS.

Claims 1, 3-10 and 12-23 remain in this application. Claims 2 and 11 have been cancelled. Claim 1 has been amended to incorporate the subject matter of claims 2 and 11. New claims 24 and 25 have been added. Support for claims 24 and 25 can be found, for example, in Table 1A.

#### **Rejections under 35 USC 103**

The Examiner has rejected the claims as being unpatentable over Got et al (US 6,066,278) in view of Kishimura et al (US 4,755,553). Applicant respectfully traverses having regard to the following comments.

Got et al is generally discussed in the present specification in paragraph [0003]. The present specification also specifically discusses Got et al. in paragraphs [0044], [0048] and [0058], which indicate that results obtained by the present invention are superior to those obtained by Got et al, and that results obtained by the present invention are in contradiction to the teachings of Got et al.

Got et al is greatly concerned with the water content of the wood cellulose filler. Thus, at column 5, lines 24-28, Got et al indicates that a water content of the wood cellulose filler after addition of CaO must be 2-5% by weight. At column 5, lines 38-49 Got et al explains that the desired effect cannot be achieved when the water content level is outside the target range. Furthermore, Got et al teaches the importance of surface treatment of the CaO (see col. 5, lines 22-24).

In contrast, composites of the present invention are much less sensitive to the water content of the cellulosic filler, and surface treatment of the basic reactive filler is not important. For example, the present Examples show that cellulosic fillers having a humidity level of less than 2% on the one hand or as much as 19% on the other hand, provide for composites having excellent mechanical properties. Therefore, in direct contradiction to the teachings of Got et al, the water content level of the cellulosic filler does not play such an important role in the properties of the composite. Furthermore, as evidenced in paragraph [0058] of the present specification, composites of the present

invention are able to retain their mechanical properties after extensive conditioning in water even without surface treatment of the basic reactive filler, which is also in contradiction to Got et al who indicates the desirability of surface treatment to resist water absorption.

As indicated in paragraphs [0049] and [0050] of the present specification, the present invention considers the importance of balance between the amount of basic reactive filler and the acid number of the graft polyolefin. Thus, the present claims recite that the amount of basic reactive filler is 8-20 wt% and the acid number of the graft polyolefin is greater than 35 mgKOH/g. Got et al does not teach the importance of such a balance and does not teach the advantages of Applicant's specifically claimed compositional range and acid number. Got et al teaches that the amount of CaO is carefully controlled to provide for the target water content level of the wood cellulose filler. The amount of CaO is calculated on the basis of the amount of  $\text{Ca}(\text{OH})_2$  produced by the CaO (see col. 5, lines 56-60). Got et al indicates that it is preferable that the amount of  $\text{Ca}(\text{OH})_2$  be less than 10% of the total weight, which translates to an amount of CaO of less than 8% of the total weight. This is in direct contrast to the presently claimed invention which recites 8-20 wt% basic reactive filler. According to Got et al (col. 5, lines 56-60) an amount of CaO in Applicant's claimed range would result in a composite having reduced impact strength and reduced rigidity improving effects. As evidenced by the Applicant's Examples; such a reduction in properties is not observed. In fact, as indicated in paragraph [0044] of the present specification, Applicant's composites have superior mechanical properties in comparison to Got et al.

Thus, Got et al teaches away from the present invention.

Kishimura et al does nothing to ameliorate the deficiencies of Got et al. Kishimura et al is directed to a primer composition, not to a composite. Primer compositions are meant to be painted on to a substrate; they are not meant to be used in structural applications where mechanical properties such as flexural properties, tensile properties and impact strength are important considerations. Kishimura et al is concerned with improving the chemical properties (e.g. solvent resistance) of a primer composition (see col. 3, lines 19-45), not mechanical properties (e.g. tensile, flexural and impact properties) of a composite. Therefore, one skilled in the art would not look to Kishimura et al for information regarding ways to improve mechanical properties. As evidenced from the Examples of the present application, an important aspect of the present invention is improvement to mechanical properties of cellulose filled thermoplastic composites.

Since Got et al teaches away from the present invention and Kishimura et al is not directed to composites at all, one skilled in the art would not seek to

combine Kishimura et al with Got et al to arrive at the presently claimed invention.

In respect of Coran et al and Felegi Jr. et al, these documents describe systems that are quite different from the presently claimed composite. Neither of these documents disclose systems comprising a polyolefin and a graft polyolefin as presently claimed. Therefore, one skilled in the art would not look to these documents for a solution to the problems solved by the present invention.

In view of the above amendment and remarks, reconsideration on all claims is respectfully requested. In the event any matters remain to be resolved in view of this communication, the Examiner is encouraged to call the undersigned so that a prompt disposition of this application can be achieved. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

ANISSIMOFF & ASSOCIATES

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By



Hans Koenig

Reg. No. 46,474

Tel.: (519) 673-5591